

DECUS NO.

8-518

TITLE

PS/8 FORTRAN ALPHABETICAL SORT

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COMPANY

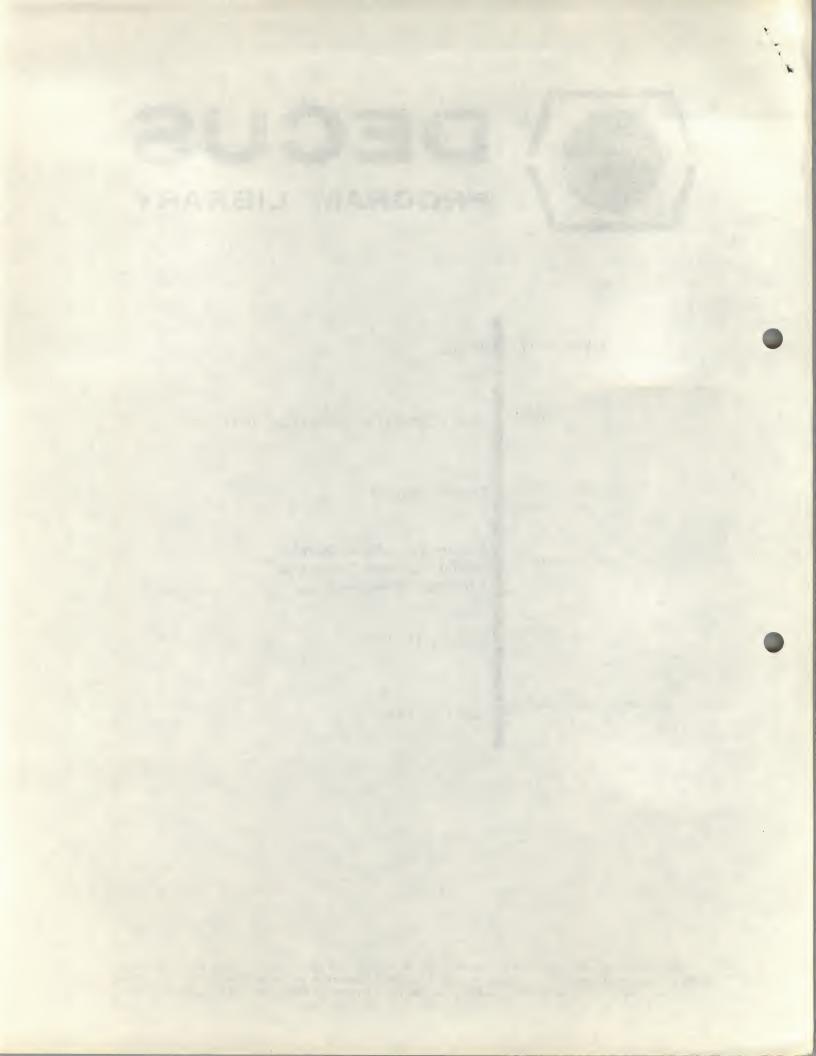
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DATE

February 11, 1972

SOURCELANGUAGE

PS/8 FORTRAN



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DECUS Program Library Write-up

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This is an alphabetical sort of any number of fields of any width. The array to be sorted must be an integer array of ASCII characters stored in A2 format. The program is a subroutine and is called from the main program.

Call SORT with the following arguments:

NAME - Array with fields to be sorted. Routine returns the sorted array in NAME.

NFLD - Width of field divided by 2. If field contains 20 characters, NFLD=10.

NUMBER - The number of fields to be sorted.

For efficiency the dimension of NAME should be adjusted to that of your longest array to be sorted. NAMEA and NAMEB should be adjusted to the maximum field width divided by two.

000000000	******ALPHABETICAL SORT**** CALL SORT FROM MAIN PROGRAM NAME ARRAY WITH FIELDS TO BE SORTED/RETURNS SORTED NFLD WIDTH OF FIELD DIVIDED BY 2 NUMBER NUMBER OF FIELDS
CCC	FOR EFFICIENCY ADJUST DIMENSION OF NAME TO THAT OF YOUR MAXIMUM ARRAY TO BE SORTED. SUBROUTINE SORT (NAME, NFLD, NUMBER)
8øø	DIMENSION NAME(1000), NAMEA(36), NAMEB(36) IX=NUMBER-1 LSW=1
	DO 1000 I=1, IX DO 900 J=1, NFLD M=NFLD* I+J-NFLD N=NFLD* I+J
odd	NAMEA(J)=NAME(M)
9ØØ C	NAMEB(J)=NAME(N) *COMPARE FIELDS*
C	DO 2Ø J=1, NFLD
	IF (NAMEA(J)-NAMEB(J)) 1ØØØ,2Ø,3Ø
2Ø	CONTINUE
,	GOTO 1000
3,0	LSW=1
С	*INTERCHANGE FIELDS (THEY ARE NOT ALPHABETICAL)*
	DO 950 J=1, NFLD
	M=NFLD* I+J-NFLD
	N=NFLD* I+J NAME(M)=NAMEB(J)
95Ø	NAME(N)=NAMEA(J)
1000	CONTINUE
1,000 C C	* IF AN INTERCHANGE WAS MADE DURING THIS PASS
C	MAKE ANOTHER PASS*
	IF (LSW) 999,1Ø1Ø,8ØØ
1010	RETURN
999	CALL EXIT
	END